3. ESSENTIAL FISH HABITAT

3.1 Atlantic Sharks

The Cooperative Atlantic States Shark Pupping and Nursery (COASTSPAN) Survey continued through 2003 and results for the 2002 sampling year were compiled. Juvenile sharks collected, tagged and released that year included the Atlantic sharpnose, blacknose, blacktip, dusky, finetooth, lemon, nurse, sandbar, sand tiger, scalloped hammerhead, spinner, and tiger sharks, and smooth dogfish. Included in the sampling were a number of recaptured sharks which were tagged in previous years. Environmental parameters were also sampled to indicate habitat preferences. In addition, in 2002, the random stratified sampling plan in Delaware Bay was refined, and the analytical methodology for estimating sandbar shark populations within the Bay was further developed (McCandless and Pratt 2003).

In 2003, NOAA Fisheries initiated the Cooperative Gulf of Mexico States Shark Pupping and Nursery (GULFSPAN) Survey to expand upon the Atlantic COASTSPAN Survey. Due to funding circumstances, a complete season of sampling on the part of all states involved was not possible. However, those sharks captured, tagged and released included the Atlantic sharpnose, blacktip, bonnethead, finetooth, spinner, blacknose, scalloped hammerhead, bull, and great hammerhead. Environmental parameters were also sampled for use in determining habitat preferences (Carlson et.al., 2003).

Amendment 1 to the HMS FMP, published in 2003, contains updated EFH designations for five shark species which were selected for review based on a change in management status (blacktip, sandbar, and finetooth sharks) and new information becoming available (dusky and nurse sharks). In addition, a time/area closure from January through July was specified for sandbar and dusky shark nursery and pupping areas encompassing EFH and habitat-of-particular-concern (HAPC) areas of approximately 4,490 nm identified off North Carolina. In 2004, EFH updates for all Atlantic HMS for which new information is available will be included in the development of Amendment 2 to the HMS FMP.

3.2 Atlantic Billfish

NOAA Fisheries and University of Miami scientists have continued work initiated in 2002 to electronically tag blue and white marlin adults and to sample newly-hatched larvae in western North Atlantic waters. To-date, archival tags have been deployed on 52 blue marlin and 9 white marlin, and several hundred larvae collected during respective spawning seasons. The program goals are to improve understanding of reproductive season movements, and delineate spawning and nursery grounds through examination of larval distribution with respect to oceanographic features and forces. As the result of adult and larval sampling off the Dominican Republic, and applying conventional histological techniques and new genetic methods in identifying newly hatched marlin larvae, the research team broke new ground in 2003 by identifying a white marlin spawning area and showing that it is shared with spawning blue marlin. This information will be used for the protection and management of these spawning grounds and rebuilding the stocks (Prince, 2003).

3.3   Atlantic Bluefin Tuna

The Tag-A-Giant (TAG) program, a collaborative effort among scientists from Stanford University, the Monterey Bay Aquarium, and NOAA Fisheries, continued in 2003, placing electronic tags internally and externally on Atlantic bluefin tuna in the North Atlantic to continuously record data. The major goals of continued deployments are to discern habitat preferences for spawning and feeding grounds, spawning site fidelity, and the level of mixing between eastern and western stocks. An additional objective is to determine the influence of environmental parameters on behaviors, abundance and distribution of adolescent and mature bluefin tuna. As of September 2003, over 750 electronic tags, 55 percent of these being surgically implanted archival tags, have been deployed in Atlantic bluefin tuna off North Carolina and Massachusetts, and in the Gulf of Mexico. In 2003, experiments were designed for calculating the error around geolocation estimations, and researchers have acquired a robust statistical system for position estimation, the first step required to temporal and spatial modeling of the tag results (Block, 2003).

References for Section 3

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